

impact of TEIs in patients after an acute coronary syndrome (ACS patients) and in patients with chronic heart failure (CHF patients). We developed multi-state Markov cycle decision trees where TEIs were compared with no intervention. Model parameters and outcomes were extracted from a reanalysis of a recent randomized trial in ACS patients, and from a literature search in CHF patients. For both models, the study was conducted adopting the health care payer perspective and time horizon was one year. TEI incremental cost-utility ratios (ICURs) were expressed in 2011 €/QALY and US \$/QALY for ACS and CHF patients, respectively. Base cases analyses were completed by univariate and probabilistic sensitivity analyses. **RESULTS:** TEI was more expensive and less effective than no intervention considering the whole ACS patients population. In the subgroup of ACS patients with one risk factor and no previous history of ACS, however, the ICUR was 20,343 €/QALY. In this subgroup, the probabilistic sensitivity analysis also indicated that TEI was not cost-effective in a substantial number of simulated iterations. TEI was dominant—i.e. less expensive and more effective than no intervention—in the base-case analysis of CHF patients, with 5448 \$ saved per QALY. In the sensitivity analyses, TEI cost-utility was confirmed in most cases and the cost of readmission was the most sensitive parameter. **CONCLUSIONS:** Results illustrate the helpfulness of cost-utility modeling for identifying subgroups of patients who should be targeted by TEIs and which measurements require particular attention in cost-utility evaluation. Our modeling framework could be helpful for evaluating the cost-utility of TEIs in other settings.

PCV61

COST-UTILITY ANALYSIS OF ANTIHYPERTENSIVE MEDICATIONS IN NIGERIA USING A DECISION ANALYTICAL MODEL

Ekwunife O, Okafor C, Umeorah E
University of Nigeria, Nsukka, Enugu, Nigeria

OBJECTIVES: The objective of this study was to evaluate the cost-effectiveness of drugs from 4 classes of antihypertensive medications for use in management of hypertension in Nigerians without compelling indication to use a particular antihypertensive drug. **METHODS:** The study employed decision analytic modeling. Interventions were obtained from a meta-analysis. The Markov process model calculated clinical outcomes and costs during a life cycle of 30 years of 1000 hypertensive patients stratified by 3 cardiovascular risk groups, under the alternative intervention scenarios. Quality adjusted life year (QALY) was used to quantify clinical outcome. The average cost of treatment for the 1000 patient was tracked over the Markov cycle model of the alternative interventions and results were presented in 2010 US Dollars. Probabilistic cost-effectiveness analysis was performed using Monte Carlo simulation, and results presented as cost-effectiveness acceptability frontiers. Expected value of perfect information (EVPI) and expected value of parameter perfect information (EVPII) analyses were also conducted for the hypothetical population. **RESULTS:** Thiazide diuretic was the most cost-effective option across the three cardiovascular risk groups. Calcium channel blocker was the second best for Moderate risk and high risk with a willingness to pay of at least 2000\$/QALY. The result was robust since it was insensitive to the parameters alteration. **CONCLUSIONS:** The result of this study showed that thiazide diuretic followed by calcium channel blocker could be a feasible strategy in order to ensure that patients with hypertension are better controlled.

PCV62

UTILISATION OF DRUGS INVOLVED IN TREATMENT OF CARDIOVASCULAR DISEASES IN SLOVAK REPUBLIC WITHIN THE YEARS 2008–2011

Bellova K¹, Gatilova K², Foltan V², Majtas J²
¹Comenius University, Bratislava, Slovak Republic, ²Pharmaceutical faculty Comenius University, Bratislava, Slovak Republic

OBJECTIVES: The evaluation of the utilisation of drugs involved in treatment of CVD, its consumption in terms of expenditures units and number of packages prescribed within 2008–2011. **METHODS:** Analysed data were abstracted from State Institute for Drug Control SR and studied in accordance with financial units (€) and number of packages prescribed every year. **RESULTS:** The overall consumption of drugs involved in treatment of CVD in number of packages prescribed was increasing from 2008 until 2010. In 2011 very slight decrease can be seen (3,8% from 37 331 100 to 35 913 249). In terms of financial units, the consumption of drugs increased from 181 319 656,40€ in 2008 to 194 185 283,80€ in 2011 (the highest). The most prescribed ATC group was C09–Renin–Angiotensin System agents (24%, with its peak in 2010–9076 419 packages), in financial view it represents 33% (246 521 428,70 €) of all expenditures on CVD drugs (749 777 407,30 €). Out of this group, C09A–ACEI plain was the one most prescribed with its peak in 2008 (4 820 987 packages, 23 172 192,40€), even though its prescription has decreasing tendency (the lowest in 2011 only 4 064 845, 17 262 264,40€). **CONCLUSIONS:** Obtained data proved that despite slight decrease in the number of prescribed drugs in 2011, the financial expenditures for cardiovascular medicines increase every year. The most prescribed were C09 the Renin–Angiotensin System agents–C09A ACEI plain, but the expenses had a decreasing tendency. According to this study, there is no continual proportion between amount of prescribed medicine and the amount of expenses on CVD.

PCV63

IMPACT OF ADHERENCE TO STATINS AND ANTIHYPERTENSIVE MEDICATIONS ON SHORT-TERM DISABILITY COSTS IN AN EMPLOYER POPULATION

Wright D¹, Hagen S¹, Finch R², Edington D¹
¹University of Michigan, Ann Arbor, MI, USA, ²National Business Group on Health, Washington, DC, USA

OBJECTIVES: It is estimated that over 100 million Americans currently have high blood pressure, high cholesterol or both, and most of these individuals do not

properly control their conditions. This study assesses the relationships between employee adherence to both statins and antihypertensives and the short-term disability costs in a large manufacturing company. **METHODS:** A retrospective analysis of pharmacy claims was conducted to identify individuals within a large manufacturing company who were continuously eligible for a three-year time frame (between 2001 and 2007) and who received a prescription for both an anti-hypertensive and a statin during that time. In those cases where an individual's eligibility spanned a longer time period, the most recent three-year span was chosen. The resulting sample included both treatment-naïve and treatment-experienced patients. Medical, pharmacy, and short-term disability costs were calculated for a one year follow-up. Adherence was measured using proportion of days covered (PDC), where a PDC≥80 was considered adherent. Multi-variable linear regression was used to examine the relationships between cost and adherence, controlling for patient demographics (age, gender, and job type) and Charlson comorbidity score. **RESULTS:** Among the 10575 individuals in the study, the mean adherence to these cardiovascular medication classes was 67%, and 46% (N=4859) of the study population had a PDC≥80. The average total medical/pharmacy costs were higher for the adherent patients, primarily due to their higher pharmacy costs. Individuals who were adherent to their cardiovascular medications had lower short-term disability costs (\$1331/year) than did the non-adherent (\$1828/year). **CONCLUSIONS:** In general, patients who were adherent to their statin/anti-hypertensive drug regimens had lower short-term disability costs than did the non-adherent. Employers concerned with the relationship between cardiovascular disease and employee costs should also consider the effect of adherence to statins and antihypertensives on short-term disability costs.

PCV64

HEALTH CARE RESOURCE UTILIZATION AND COSTS FOR ACROMEGALY: A RETROSPECTIVE STUDY IN A LARGE CLAIMS DATABASE IN THE UNITED STATES

Burton TM¹, Le nestour E², Bancroft T¹, Di donato FA¹, Neary M³
¹Optuminsight, Eden Prairie, MN, USA, ²PharmaNet/13, Nanterre, France, ³Novartis Corporation, East Hanover, NJ, USA

OBJECTIVES: Describe health care utilization and costs associated with acromegaly, a rare pituitary disorder that may result in considerable comorbidities and for which data on US health care costs are limited. **METHODS:** Retrospective claims study in a US commercial health plan analyzed adults with an acromegaly-related diagnosis, procedure, or medication between July 2002 to June 2010. Subjects were observed for six months before their first acromegaly-related claim and until death or disenrollment. **RESULTS:** A total of 1056 subjects had mean (SD) age of 42 (17.2) years on their first acromegaly claim; 49% were male. Common comorbidities included hypertension (23.2%), diabetes (14.4%), and arthropathy (14.3%). Most common specialty office visits included neurology (66.4%), endocrinology (58.2%), and ophthalmology/optometry (45.8%). A majority of subjects (72.8%) visited a primary care physician (PCP). Average number of office visits per year was 4.8 for PCPs, 2.2 for endocrinologists, 1.5 for neurologists, and 0.6 for ophthalmologists/optometrists. Proportion with any all-cause and acromegaly-related healthcare utilization included 99.9% and 96.7% with an ambulatory visit, respectively, 48.6% and 6.8% with an emergency room visit, and 45.9% and 25.4% with an inpatient admission. Total all-cause healthcare costs (medical+pharmacy) averaged \$2255/per-member-per-month. While pharmacy costs comprised 19.1% (\$431/2255) of total costs, ambulatory and inpatient costs comprised the highest proportion of total medical costs, 48.1% (\$877/1,825) and 44.7% (\$815/1,825), respectively. Of total all-cause health care costs, 44.6% was for total acromegaly-related care (\$1,005/2,255). Of total acromegaly-related medical costs, 63.3% (\$498/787) was for acromegaly-related inpatient care. **CONCLUSIONS:** While acromegaly is generally under-diagnosed, subjects in this study had substantial health care utilization and costs for acromegaly-related care. Subjects visited a PCP most often, suggesting that substantial disease management was provided by physicians who may only treat a few acromegaly patients during their medical careers. Future studies focusing on treatment patterns prior to confirmed acromegaly diagnosis may increase awareness and expedite diagnosis of this condition in an earlier stage.

PCV65

SERVICE UTILIZATION, PREDICTORS AND COSTS AMONG HIGH-RISK PATIENTS WITH CARDIOVASCULAR DISEASE: USING REAL WORLD DATA FROM THE AUSTRALIAN REACH REGISTRY

Ademi Z¹, Reid C², Bhatt D³, Steg PG⁴, Liew D⁵
¹Melbourne University, Melbourne, Australia, ²Monash University, Melbourne, Victoria, Australia, ³Harvard Medical School, Boston, MA, USA, ⁴Centre Hospitalier Bichat-Claude Bernard, Paris, France, ⁵The University of Melbourne, Parkville, Victoria, Australia

OBJECTIVES: To quantify the resource utilization predictors and cost of cardiovascular disease using the Australian Reduction of Atherothrombosis for Continued Health (REACH) registry. **METHODS:** This paper describes two-year cost data estimated using a bottom-up costing approach, and presents patterns of resource utilization based on types of vascular disease. The multivariate predictors of number of hospitalization, medication and other health services used per patient and related costs at two-year follow-up were examined using generalized linear models (GLM). Government reimbursement data from 2011 was used to calculate direct health care costs. **RESULTS:** Overall 2873 of the total 68 236 patients in the REACH registry cohort were enrolled from Australia. The two-year follow-up data was available for 2856 (99.4%) patients with or at high risk of atherothrombosis. Overall, the mean (SD) direct expenditure over 24 months of follow-up per person was \$7544 (\$10 758). In the adjusted model, patients with coronary artery disease (CAD) and peripheral arterial disease (PAD) incurred +A\$1255 (95% CI \$199 to \$2310) and